

INVESTIGATOR'S ANNUAL REPORT

National Park Service

All or some of the information provided may be available to the public

Reporting Year: 2003	Park: Shenandoah NP
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Permit#: SHEN-2003-SCI-0001	
Park-assigned Study Id. #: SHEN-00281	
Project Title: Survey of Resident Butterfly Sibling Species on the Blue Ridge.	
Permit Start Date: Jan 13, 2003	Permit Expiration Date Oct 01, 2003
Study Start Date: Jan 13, 2003	Study End Date Oct 01, 2003
Study Status: Completed	
Activity Type: Monitoring	
Subject/Discipline: Invertebrates (Insects, Other)	
Objectives: <p>To continue my previous work to find, document and determine the status of butterfly sibling species of the genera <i>Celastrina</i> (Lycaenidae), now to include also the <i>Pterourus</i> (Papilionidae). Past work within Shenandoah National Park during the years 2000-2001 documented the presence of both the undescribed "Cherry Gall Azure" (<i>Celastrina</i> sp. nov. - in research stage) and Northern Azure (<i>Celastrina lucia</i>) on the Blue Ridge near Big Meadows. Unfortunately, both species were represented by single confirmed voucher specimens and due to weather conditions and personal time constraints, no further observations were possible. The goal is to continue searching for these species, determine their precise colony locations (if any), identify hosts, and assess their status on the Blue Ridge.</p> <p>Additionally, I have discovered and described a new species of butterfly of the <i>Pterourus</i> group of Tiger Swallowtails. This was described as <i>P. appalachiensis</i> in the Taxonomic Report of the International Lepidoptera Survey in 2002. While described from N.C. and other areas in VA., W.V., MD. and PA., This butterfly has been observed on the Blue Ridge during my <i>Celastrina</i> research. Its biology is only partly known and hosts have not yet been identified.</p> <p>None of these butterflies are known to be either rare or endangered in their core ranges. Blue Ridge lies within the core of <i>P. appalachiensis</i>, and it is believed that this taxon represents the common flight of "Tiger Swallowtails" on the Blue Ridge in May-June. <i>C. lucia</i> and the "Cherry Gall Azure" are at the edge of their more northerly range here, thus their status cannot be determined until more field work is accomplished.</p> <p>All sibling <i>Celastrina</i> and <i>Pterourus</i> require sampling by net to obtain a definitive identification. These cannot be reliably identified by sight. To satisfy standard survey requirements, for the <i>Celastrina</i>, candidate specimens require vouchering. I would request 3-5 <i>Celastrina</i> of each potential species be sampled at study sites yet to be determined (this includes known species <i>C. ladon</i>, <i>C. neglecta</i> and <i>C. neglectamajor</i> which can all be confused with the two related target species). Study sites will be determined once suitable known habitat types are identified by hiking along trails. For <i>P. appalachiensis</i>,</p>	

these can be identified by net/release. However, one male and female voucher from each county within the park would document its presence there and facilitate any future statewide butterfly survey.

Several living females of each species may be required to conduct rearing and host-acceptance study. This study would be done at the researcher's home in controlled, caged conditions.

To report additional species, net/release of some species would be required to document their presence.

Findings and Status:

Weather conditions were not conducive to my fieldwork. On the days I was able to visit the park the weather was uncooperative and not many butterflies were in evidence. Other butterflies were present and I have documented a list of those in hard copy and sent to SNP

For this study, were one or more specimens collected and removed from the park but not destroyed during analyses?

No

Funding provided this reporting year by NPS:

0

Funding provided this reporting year by other sources:

0

Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college

Full name of college or university:

n/a

Annual funding provided by NPS to university or college this reporting year:

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